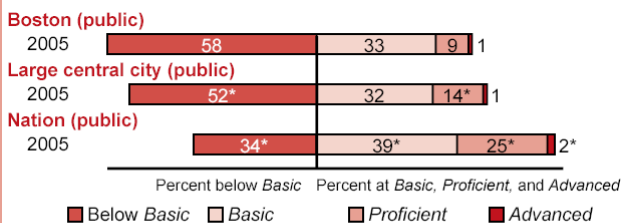


The National Assessment of Educational Progress (NAEP) assesses science in two major dimensions: Fields of Science (Earth, Physical, and Life) and Knowing and Doing Science (Conceptual Understanding, Scientific Investigation, and Practical Reasoning). The NAEP science scale ranges from 0 to 300. Scales are created separately for each grade. In 2005, Boston School District was one of ten urban districts that voluntarily participated in the NAEP science assessment on a trial basis.

### Overall Science Results for Boston

- In 2005, the average scale score for fourth-grade students in Boston was 133. This was lower than the average score in the nation (149).<sup>1</sup>
- Boston's average score (133) in 2005 was not significantly different from that of public schools in large central cities (135).<sup>2</sup>
- The percentage of students in Boston who performed at or above the NAEP *Proficient* level was 10 percent in 2005. This percentage was smaller than that in large central cities (15 percent).
- The percentage of students in Boston who performed at or above the NAEP *Basic* level was 42 percent in 2005. This percentage was smaller than that in large central cities (48 percent).

### Student Percentages at NAEP Achievement Levels



NOTE: The NAEP grade 4 science achievement levels correspond to the following scale points: Below Basic, 137 or lower; Basic, 138–169; Proficient, 170–204; Advanced, 205 or above.

### Performance of NAEP Reporting Groups in Boston: 2005

Reporting groups	Percent of students <sup>3</sup>	Average score	Percent below Basic	Percent of students at or above Basic	Percent of students at or above Proficient	Percent Advanced
Male	51	135	55	45	10 ↓	1
Female	49	132	60 ↑	40 ↓	9 ↓	1
White	12 ↓	153 ↓	27	73	26 ↓	3
Black	47 ↑	126	67	33	4	#
Hispanic	30 ↓	129	65	35	5 ↓	#
Asian/Pacific Islander	9 ↑	157	24	76	32	4
American Indian/Alaska Native	#	‡	‡	‡	‡	‡
Eligible for free/reduced-price school lunch	83 ↑	130 ↑	62	38	7	#
Not eligible for free/reduced-price school lunch	14 ↓	152	29	71	27 ↓	3

### Average Score Gaps Between Selected Groups

- In 2005, male students in Boston had an average score that was not significantly different from that of female students. In large central cities, there was no significant difference between the average score of male and female students.
- In 2005, Black students had an average score that was lower than that of White students by 27 points. This performance gap was narrower than that of the large central cities (37 points).
- In 2005, Hispanic students had an average score that was lower than that of White students by 25 points. This performance gap was narrower than that of the large central cities (33 points).
- In 2005, students who were eligible for free/reduced-price school lunch, an indicator of poverty, had an average score that was lower than that of students who were not eligible for free/reduced-price school lunch by 22 points. This performance gap was narrower than that of the large central cities (29 points).
- In 2005, the score gap between students at the 75th percentile and students at the 25th percentile was 38 points. This performance gap was narrower than that of the large central cities (46 points).

### Science Scale Scores at Selected Percentiles

	Scale Score Distribution		
	25 <sup>th</sup> Percentile	50 <sup>th</sup> Percentile	75 <sup>th</sup> Percentile
<b>Boston</b>	114	132	152
<b>Large central city (public)</b>	113	136 *	159 *
<b>Nation (public)</b>	129 *	152 *	172 *

Scores at selected percentiles on the NAEP science scale indicate how well students at lower, middle, and higher levels performed. For example, the data above show that 75 percent of students in public schools nationally scored below 172, while 75 percent of students in Boston scored below 152.

# The estimate rounds to zero.

‡ Reporting standards not met.

\* Significantly different from Boston.

↑ Significantly higher than large central cities. ↓ Significantly lower than large central cities.

<sup>1</sup> Comparisons (higher/lower/not different) are based on statistical tests. The .05 level was used for testing statistical significance. Comparisons across jurisdictions and comparisons with the nation or within a jurisdiction across years may be affected by differences in exclusion rates for students with disabilities (SD) and English language learners (ELL). The exclusion rates for SD and ELL in Boston School District were 5 percent and 4 percent in 2005, respectively. Statistical comparisons are calculated on the basis of unrounded scale scores or percentages.

<sup>2</sup> "Large central city" includes public schools located in large central cities (population 250,000 or more) within metropolitan statistical areas as defined by the federal Office of Management and Budget. It is not synonymous with "inner city."

<sup>3</sup> For comparison, non-White students comprised 79 percent of students in large central city public schools and 43 percent in public schools nationally. Also, students eligible for free/reduced-price school lunch comprised 69 percent of students in large central city public schools and 45 percent in public schools nationally.

NOTE: Detail may not sum to totals because of rounding and because the "Information not available" category for free/reduced-price school lunch and the "Unclassified" category for race/ethnicity are not displayed. Visit <http://nces.ed.gov/nationsreportcard/science/tuda.asp> for additional results and detailed information.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2005 Trial Urban District Science Assessment.